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OBSERVATIONS

ON THE

BARK

OF A

PARTICULAR SPECIES

OF

WILLOW,

SHOWING ITS SUPERIORITY TO THE PERUVIAN, AND ITS SINGULAR EFFICACY IN THE CURE OF AGUES, INTERMITTENT FEVERS, FLUOR ALBUS, ABSCESSES, HEMORRHAGES, &c.

ILLUSTRATED BY CASES.

BY SAMUEL JAMES,

OF THE CORPORATION OF SURGEONS.

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PREFACE.

THE writer of the following pages is a young provincial practitioner, without literary advantages to polish his performance, or a name to excite the attention of the public. It is possible that what he has to offer may be consigned to neglect and oblivion; it is possible that he may be accused of presumption in offering his juvenile ideas, in their present crude form, to the attention of the faculty. These reflections might have dissuaded him from becoming an author; but he has an object in view of more importance than

than literary reputation, and personal delicacies must always give way to public interest. He is persuaded that he has discovered, or rather improved upon the discovery of, a medicine which is capable of being rendered beneficial to mankind, and particularly to the poorer class, to whom several of the disorders for which it is a remedy are especially incident. Actuated by this persuasion, all he desires is a fair trial and an impartial judgment; and if he fail of obtaining these he will yet console himself with the consciousness of having intended well.

Hoddesdon, Aug. 1st, 1792.

OBSERVATIONS

ON A PARTICULAR

SPECIES OF THE WILLOW, &c.

That every climate possesses antidotes for the different disorders with which its inhabitants are afflicted, is an old, and, I believe, a just observation: but it seems to be the lot of human nature to overlook the merits of what is easily procured and costs but little, and to be captivated with a commodity which can only be acquired with difficulty and expence. Thus we go to the Western extremity of South America for a remedy of dis-

orders, for which we have a better at home; and send annually out of the kingdom a considerable sum of money to purchase a bark, when we have a tree in our fields which offers us one of equal, if not superior virtue, and which may be cultivated almost without trouble or cost.

The discovery of the virtues of this tree was first made by Mr. E. Stone, a clergyman of Chipping-Norton, in the county of Oxford, and communicated by him to the Royal Society in the year 1763. Considering the importance of this communication, from the prevalence of the disorders for which it suggests a cure, the dearness of the article for which it recommends a substitute, and the frequent adulterations practised by the venders of that article, on account of its dearness;

dearness; it is astonishing that, in the course of thirty years, so little attention has been given to the subject. The bark of the Willow is not kept in the shops of our Druggists, and, the author of the discovery excepted, there appears to be no Englishman who has written at large upon its qualities.* True it is, that many writers of eminence have mentioned the medicine, and it is to be found in almost every treatise of the Materia Medica: but it is uniformly spoken of in a style of hypothesis, and not with the confidence resulting from a conviction of its excellence; as if the writers had derived their information from a

 common

* Two German Physicians of the names of Clossius and Gunzius appear to have written expressly upon the bark of the Willow; but having tried in vain to procure their performances, I can say nothing of the nature or merit of them.

common source, (the letter of Mr. Stone) and had made few or no experiments upon the bark themselves.

What I have to offer upon the subject is the result of experience, in which I have been successful beyond my expectation. I was soon, indeed, induced to reject the species of Willow employed by Mr. Stone, which failed with me, as he acknowledges it to have done in some instances with him,* and to adopt another, in consequence of some chemical trials hereafter mentioned.

There

* In the instances in which Mr. Stone was unsuccessful, he seems himself to have believed that the failure was owing to the inferiority (from situation) of the tree made use of by him, which was the common White Willow. His words are these: "The bark I had was "gathered in the northern parts of Oxfordshire, which are chiefly of a dry or gravelly nature, affording few moist

There are no fewer than eleven species of Willow; as there is however, but one that I have found to be of eminent service, I shall content myself with giving a description of that only, which will be sufficient to prevent its being confounded with any of the other species.

It

" moist or moory places for this tree to grow in, and " therefore I suspect that its bark is not so good here as " in some other parts of the kingdom. Few vegetables " are equal in every place; all have their peculiar soils, " where they arrive at greater perfection than in any " other place; and therefore why may not the Cortex " Salignus, or Cortex Anglicanus, have its favourite soil, " where it may flourish most, and attain to its highest " perfection. It is very probable it hath; and perhaps it " may be in the fens of Linconshire, Essex, Kent, or " some such like situations; and though the bark which " grew in the county of Oxford may seem in some " particular cases to be a little inferior to the Quinquina, " yet in other places it may equal, if not exceed it."— This is in a small degree true; but the difference between the several species of Willow is considerably greater than that of the same species in different soils.

It is styled by Ray, in his *Synopsis*, *Salix Latifolia (broad leaved Willow)* and is thus described in the Botanical Arrangement of Doctor Witherington:

"The leaves of the *Salix Latifolia* are "egg-shaped, downy on the under "surface, waved at the edge, with "little teeth towards the end. *The* "*lower buds send forth leaves*; *the upper buds* "*catkins without leaves*. Bark rough; "grey. The wood is smooth, soft, "and flexible. It is converted into "charcoal for making gunpowder "and drawing pencils. The Laplan-"ders make a sort of leather of the "bark, which they manufacture into "gloves. They give a decoction of "the leaves for the heart-burn. The "flowers are particularly grateful to "bees, and the leaves are eaten by "horses, cows, goats, and sheep.

"The

"The Purple Emperor Butterfly,
"Papilio Iris, the Highflyer Moth;
"the Scarce-silver-line Moth, and the
"Copper Under-wing Moth, feed
"upon it."

This tree grows frequently to the height of from fifteen to twenty feet. Almost any kind of soil will suit it; but it delights most in a cold, clayey, humid situation.

The best mode of propagating it is by cuttings of two or three years growth, and of about three feet long, which should be stuck halfway into the ground in the latter end of Autumn, or beginning of Spring. It grows rapidly, extending to the height of eight feet in three years. In some countries, where there is a scarcity of oak,

oak, the bark of this tree is used for tanning leather, and dying.

The bark is easily procured during the Summer months, either from the tree itself, or from toppings of from one to three inches in diameter. When it is taken off the tree, it should be placed under a shade, where the rain cannot reach it, and the air has free access. In this situation it ought to dry gradually.

In order to ascertain the degree of astringency of the different species of Willow, I have made a great number of comparative experiments on them, and on some other barks. Of the barks which I have tried, I have found only the following possessed of any considerable degree of astringency:

Cortex

Cortex Salicis Latifoliæ, or bark of the broad-leaved Willow;

Cortex Salicis Pumilæ, or bark of the dwarf Willow;

Cortex Salicis Albæ, or bark of the common white Willow;

Cortex Peruvianus, or Peruvian bark;

Cortex Quercûs, or bark of the Oak.

Of each of these barks I boiled two ounces in a quart of water, separately, for the space of fifteen minutes: I then took an ounce out of each decoction, and continued to boil the remainder for thirty minutes longer, when I set them to cool. Out of each I again took another ounce, and added thereto, as well as to the preceding ones, two grains of vitriolated iron, which directly changed the decoction of the bark of the broad-leaved Willow and that of the Oak to an inky

blackness: the others were changed to a blackish green colour, much lighter than the former; but it became somewhat darker on standing, though by no means so black as the decoction of the bark of the broad-leaved Willow and the Oak bark.

In a subsequent experiment I took two ounces of each of the aforesaid barks, and infused them separately in cold and in boiling water, for twelve hours; and upon adding the vitriolated iron to each, I found the infusions in boiling water to be as strong as the decoctions, but those in cold water to be much weaker.

Afterwards, to an ounce of each of the decoctions and infusions I added two grains of quick-lime, which precipitated of those in boiling water nearly

nearly an equal quantity, but of those in cold water a quantity much smaller.

From the best calculations I have been able to make of the comparative strength of the different decoctions, prepared as above, I have found it to be in the following ratio:

8 oz. of the decoction of the bark of the Oak were as strong as
9 oz. of that of the broad-leaved Willow, as
12 oz. of that of the dwarf Willow, as
20 oz. of that of the Peruvian bark, as
24 oz. of that of the bark of the white Willow.

From the preceding experiments it is evident, that the bark of the broad-leaved Willow is superior in astringency both to the Peruvian bark and

to that of the common white Willow. The latter, however, Mr. Stone found to be generally efficacious in agues and intermittent fevers; and Dr. Cullen thus favourably speaks of it:

"The few opportunities we have "had of employing the *Salix Alba* in "intermittent fevers, show that it "may be, in some cases, an effectual "remedy. The sensible qualities seem "to me to be that of a pretty strong, "but sufficiently agreeable bitter, "with somewhat of stypticity. These "qualities persuade me that it is a "valuable medicine, and as promising "a substitute for the Peruvian bark as "any I have known to be offered."*

It is to be lamented that Dr. Cullen did not make experiments on all the different

* See Cullen's Materia Medica, vol. II. p. 114.

different species of this tree. Had he done so, he would have found the virtue of the bark of which he speaks bear a *less proportion* to that of the *broad-leaved Willow*, than does the virtue of the pale Peruvian bark of the shops to that of the red. And from his eminence in the profession, it is probable that his authority would have been sufficient to have brought the medicine into general use.

It is now more than three years since I first administered the bark of the broad-leaved Willow in the cure of agues and intermittent fevers; and and from all the instances in which I have employed it, which have not been a few, from agues being frequent in my neighbourhood, I have been confirmed in my opinion of its pre-eminence as well over the Peruvian,

vian, as every other species of bark yet discovered.

I have in some instances administered first the Peruvian, and afterwards the bark of the common white Willow, in as large doses as the patient's stomach would bear, and that for a considerable length of time, without being able to remove the paroxysm; but on leaving off these medicines, and having recourse to the decoction of the bark of the broad-leaved Willow, the disorder has soon disappeared.

In the instances in which Mr. Stone made use of the bark of the common white Willow, " his patients," he says, " were never prepared, either " by vomiting, bleeding, purging, or " any medicine of a similar intention, for

" for the reception of this bark; but " they entered upon it abruptly and " immediately, and it was always " given in powders, with any com- " mon vehicle, as water, tea, small- " beer, and such like." *— I have, on the contrary, generally found the bark of which I speak agree best after emptying the stomach and bowels, which may be owing to its being so much stronger than the common white Willow bark; and the best preparations of it to be a decoction, or infusion in boiling water, with a little gum arabic, to keep the particles of the bark suspended, which are apt, on standing for a little time, to precipitate to the bottom. Aromatics also I have thought not only made it sit easier on the stomach,

* See the Philosophical Transactions, vol. LIII. p. 197.

mach, but increased its effect: and I have frequently been forced to add a little powder or tincture of rhubarb, from its having brought on costiveness.

But it is not only in agues and intermittent fevers that I have experienced the excellence of this bark, and its superiority over the Peruvian: I have found it alike efficacious, where the tone or strength of the system has been suddenly reduced in consequence of large collections of pus, hemorrhages, fluor albus, colliquative diarrhœas, &c. as well as in several scrofulous cases; and in a single instance, where the tone of the stomach was so entirely destroyed from hard drinking, that the patient could not, at any one time, eat the quantity of half an ounce of meat.

Out

Out of a great number of cases, in which I have administered this bark with success, I have selected the following: they are taken nearly verbatim from my diary; and it may possibly be no disadvantage, that there is sometimes preserved in them the feelings both of the Patient and the Practitioner.

CASE. I.

J. B. aged 40, was attacked in the Autumn of the year 1789 with a quartan fever. On his first application to me I prescribed an emetic, and half a dram of the Peruvian bark to be taken every two hours, during the intervals of the fits. This dose I gradually increased till it amounted to a dram. After he had taken two doses of the quantity of a dram each, he refused any longer to continue the medicine. He had at that time taken two ounces of the bark in two days: but the ague notwithstanding returned as violent as ever. I was very desirous

desirous of his giving the Peruvian bark a farther trial, but could by no entreaties prevail. I then gave the common white Willow bark a similar experiment with no better effect; upon which I administered a decoction of the bark of the broad-leaved Willow, prepared as before described. This medicine he very much liked. In the course of eight hours he took the quantity of a pint (equal to two ounces) without feeling any inconvenience from it. This was taken on the day preceding that when an attack of the ague was expected. He had, however, no return of the ague, a circumstance which pleased him so highly that he took three pints more of the decoction. He remained free from complaint till the Autumn following, when the ague returned. He applied to me again, requesting the same medi-

cine which he had had in the preceding instance. As this was the first case in which I had tried this bark, I thought his cure might be more owing to the quantity of Peruvian bark he had taken before, than to any peculiar efficacy in that of the broad-leaved Willow. As I much wished to be convinced of the efficacy of this medicine, I confess that I felt no great mortification at finding him again in the same situation. He had, however, as yet experienced but two paroxysms. I requested him therefore to wait a few days longer before he took any thing, as there was a possibility he might have no return of the fit. This I did with a view of ascertaining the real efficacy of the bark. Having waited ten days, he came to me in some warmth, saying that he could no longer bear the fits; that they

they siezed him regularly every third day; that every fit was worse than the preceding one; that he suspected I was making experiments upon him; and that if I would not give him the medicine he had had in the former instance, he should be under the necessity of applying elsewhere for advice, for he could no longer bear the disorder. I then gave him a pint of his favourite medicine, conditioning that he should take an emetic before he began to make use of it. He left me in as high glee as if he had received a treasure, and did not return till he had taken the whole. He informed me that it had agreed perfectly well with him; that his spirits and appetite were much mended; and requested to have another bottle of the same medicine. At the usual time of the ague's return he

he had taken about half of the second bottle, but to our mutual joy the disorder had taken its flight. He persevered, however, in the use of the medicine till he had taken two other pints, making in all two quarts of the decoction.

He has since had no return of the ague, though he has lived precisely in the same way he was accustomed to live before. Can there be a more convincing proof of the good effects of this bark? for, to what else, on the last attack, could the cure be attributed, as he had taken no other medicine, fifteen grains of ipecacuanha excepted?

CASE

CASE II.

J. G. aged 16, was attacked with a quotidian fever in the year 1789. I prescribed the same medicine in this which I had given in the former case, and with equal success.

I could mention a great number of these cases wherein I have successfully administered this bark, but they are in every respect so very similar, that it would be an useless employment of my own time and that of the reader.

In short, in all cases of agues and intermittent fevers that have come within

within my practice, I have found this bark, without a single exception, an infallible remedy, and I never give the Peruvian unless it is particularly demanded or prescribed by Physicians.

CASE

CASE III.

Mrs. S. of S. aged 45, of a fair complexion and delicate frame, with all the appearances of scrofula, was attacked about eight years ago with white swellings, pains in her knees, &c. which, notwithstanding a number of medicines that had been prescribed by some of the most eminent medical gentlemen in the neighbourhood, rendered her incapable of walking without the help of crutches. During several years she had suffered the most excruciating pain; but some time previously to her applying to me the pain had shifted into her loins, where it fixed.

She now complained to me of a throbbing sensation in the loins, frequent rigors, bad appetite, &c. I suspected that an abscess had formed, or was forming in the loins; and I prevailed upon her to let me examine them. I could perceive no swelling, but I discovered a fluctuation of matter in the upper and inner part of the thigh. Though I had no doubt that this was a lumbar abscess, and that the matter had formed in the loins, and fallen down to the thigh, still, as it lay exactly over the femoral artery, I did not like to open it from my own judgment alone, lest I should have mistaken the complaint, and it should prove to be an aneurism. I therefore called in a surgeon of the neighbourhood, who entirely coinciding with me in the opinion I had given of the nature of this disease, it was agreed

agreed immediately to open it: accordingly, on the 21st of June 1790, I made a puncture in the most depending part of it, and it discharged about a quart of ill digested pus. I applied the common dressings, had the patient put to bed, and administered an anodyne draught. I saw her the next day (22d), and finding that the discharge had been very great during the night, a small quick pulse, with every symptom of hectic fever coming on, I ordered a decoction of the Peruvian bark with the vitriolic acid.

23d. Found the discharge continue full as great as before, and that the patient became weaker. I then ordered two ounces of the decoction of the broad-leaved Willow to be taken every four hours.

24th. The discharge rather less, and on the whole the patient seems better.

25th. Continues better. From this time she continued the decoction till the 12th of November, when the discharge entirely ceased, and she got so far well that she could walk about with the help of a stick only, though she had not walked without crutches for several years before.

Here it is necessary to observe, that the discharge gradually decreased from the time she began to take the decoction of the bark of the broad-leaved Willow.

I ought to have mentioned, that about a fortnight after the discharge had begun to lessen, (in order to see whether

whether the decoction had contributed to stop the collection of pus) I desired the patient to leave off the medicine for three or four days, which she did; and what is remarkable, her strength, she said, had failed, and the discharge increased from that time till the period when she resumed the medicine.

The patient's recovery may be dated from the 25th of August, and she has since continued free from the complaint.

CASE

CASE. IV.

G. V. of S. aged 10, of a scrofulous habit of body, was seized, November 28th, 1790, with a very severe pain in the middle of the thigh bone. He complained also of pains in his stomach; bad appetite and costiveness. I examined his thigh, but could perceive no discoloration or enlargement. I then ordered an infusion of senna with one grain of tartarised antimony to be taken in the morning, fasting.

29th. The draught operated several times this morning, by which the pains in the thigh and stomach were much relieved.

30th.

30th. Free from pain, and seems quite well.

Dec. 2d. The pain in the thigh returned with greater violence than ever.

Repetatur haustus cathartícus.

3d. The medicine operated several times, but the pain continued very severe. On examining, I could now perceive the thigh affected to be about an inch larger in diameter than the other, but no redness. I directed the following lotion to be used frequently:

R. Cerussæ acetatæ drachmas duas,
Aceti vini albi unciam unam,
Aquæ distillatæ uncias septem. Misce.

In the use of this lotion he persevered for a fortnight without experiencing relief; on the contrary, his thigh

thigh evidently became larger, and more painful. He then made use of the following, for eight days, with no better success.

R. Salis ammoniaci unciam unam,
Aceti vini albi uncias quatuor,
Aquæ libram unam.
Misce, ut fiat lotio.

The swelling in his thigh was now very great, and the pain so severe he could get no rest. There was no redness, nor the least appearance of matter gathering at any one part more than another. I desired that the swelling might be poulticed four or five times a day, till the matter pointed at some particular part. During his applications of this last remedy, the pain grew so very acute, that the whole family became alarmed. This hastened my determination

sion to open it; for, though it did not point at any one part, still I had every reason to suspect that matter had formed, and was lodged at the bone. I accordingly told the father that I had no doubt of there being a large quantity of matter collected; and that as it was lodged deep, it must require a considerable length of time to make its way out, during which time, all the neighbouring parts might be destroyed, perhaps the bone itself, and thus no chance of a cure remain. He immediately consented to the operation, which was accordingly performed. I was under the necessity of going very deep before I could come at the matter, of which about a pint, of a thin redish colour, resembling coffee-grounds, was discharged. A pledget of lint, spread with the wax ointment,

was applied; and over this a light roller. The patient was put to bed, and an anodyne draught administered. I saw him the next day, and finding the discharge very great, and his appetite bad, I ordered two ounces of the decoction of the bark of the broad-leaved Willow every four hours. This perfectly agreed with him; his appetite gradually mended, and the discharge lessened every day, till he got entirely well, which was about four months after making the aperture.

CASE

CASE V.

W. F. of S. aged 7, of scrofulous parents, and with every mark of scrofula inherent in his constitution, was attacked precisely in the same way as G. V. But in this case I made no attempt to disperse the swelling, but poulticed with white bread and milk from the first: neither did I wait to let the swelling become so large as in the former; on the contrary, I opened it before I could perceive any fluctuation. This tumour was seated on the fore part, and about the middle of the thigh. Here the good effects of the decoction of the broad-leaved Willow were still greater, if possible,

than in the preceding case; for the discharge continued only for two months. This I believe to be owing to the patient having taken a greater quantity of the decoction than G. V. The matter was in this case also lodged at the bone.

CASE

CASE VI.

W. B. of H. aged 40, was attacked about five years ago with a violent pain in his loins and hips, which for some time rendered him incapable of walking. The surgeon who then attended him, supposed the complaint to be rheumatic, and desired him to take the volatile tincture of guaiacum, which he continued to do for some time, without finding any relief from the medicine. He then contented himself with keeping his body open, and taking opium occasionally, to relieve the pain. By the use of these last means he got so far well as to be able at times to thrash in the barn.

barn. He was however taken worse in June 1791, when I was called to see him for the first time. He complained to me of a throbbing pain in his loins; frequent rigors; bad appetite; costiveness; his pulse was low and quick. I instantly suspected that an abscess had formed in the loins, and I accordingly examined and found a small rising, or rather a fulness, on the right side, about the fifth of the lumbar vertebræ, counting from below. I examined his thighs also, and found, on measuring, that the right was larger than the left, which was to me a convincing proof that the matter had fallen down to this part.

I desired that the surgeon whom I had consulted in Mrs. S's case might be called in, which request was complied

plied with; but, from the matter not having pointed at any one place, he thought it most prudent to wait till it did; for the swelling, at this time was not great. I left him some anodyne pills to be taken at any time when the pain was very severe, and desired him to send to me as soon as the tumour got larger, as it must then in all probability be opened. The dread of having it opened prevented his sending to me till the 22d of September, when the pain was extremely severe, and the swelling large. There was now an evident fluctuation of matter, and I was decidely of opinion that it ought to be opened. I sent again for my friend, requesting he would attend the next day, and a gentleman in the neighbourhood called in a physician. We all met, and after considerable difference in opi-

nion,

nion, it was finally agreed that I should open the tumour at the upper and inner part of the thigh, where it now pointed. On opening the tumour, it discharged five measured pints of matter, and at least half a pint a day for several days after. I ordered two ounces of the decoction of the broad-leaved Willow every four hours, with opium occasionally, to relieve the pain, and procure rest. The patient now began to regain his strength so as to be able to walk from the bed to the fire, and sit up for several hours in the day. His appetite became tolerable, and he continued in a mending state for six weeks, when he was suddenly seized with a violent pain in his loins and hips, (owing to a cold he had caught) which confined him to his bed. The discharge was now become very trifling,

and

and the Patient seemed again better. About a fortnight after, he was once more suddenly seized with a violent pain in his right side; cough; difficulty of breathing, &c. I gave him nitre with the camphorated tincture of opium, and applied a blister to the side. These gave him relief for about ten days, when his cough, pain, &c. returned with additional violence, and after raising a great quantity of purulent matter, he died the next day, April 2d, 1792.

As I was entirely at a loss how to account for this sudden change, I prevailed on his wife to allow me to open his body; which I did in the presence of a surgeon and a clergyman of the neighbourhood. I found that the inflammation had extended up the proas muscle into the right lobe

of the lungs, where a large collection of matter was seated, which I traced all the way down the right side of the spine into the groin. The pleura and lungs adhered very firmly to the ribs all round the part where the matter was seated. The left lobe was entirely sound, nor could I perceive that any other part of the viscera was diseased.

It appears to me beyond a doubt, that this man might have recovered, had not the matter made its way into the lungs, which might have been prevented by opening the abscess sooner: and perhaps by keeping him more upright, as he had no cough, no pain in his chest, nor any one symptom that could lead to suppose that the lungs were affected, till some time

time after he had confined himself to an horizontal situation.

REMARKS.

If we compare this case with the preceding ones, and those with the little success attending the practice of trusting to nature, and allowing such abscesses to burst of themselves, we shall find the great advantage of the mode here recommended, since, on an average, not one person in an hundred, where the abscess is left to nature, recovers.

But I do not mean to assert, that the opening these abscesses at so early a period will do much good, without the assistance of the bark of the broad-leaved Willow, or some other

 powerful

powerfull tonic: on the contrary, I believe it will not.

I have never yet met with a case of proas or lumbar abscess unconnected with scrofula; that is to say, where neither the patients themselves nor their parents have been afflicted with that disease.

The fluids are, in this disease, in a very acrid state, the fibres greatly relaxed, and the patient of course very much debilitated. When we know this to be the case, and are sensible that astringents, or the medicines called tonic, strengthen the cohesion of the animal fibre, diminish or contract the capacity of the vessels, and, when taken into the stomach, show their effects in the most distant parts of the system, can we do other than

than allow that they are the properest medicines in such complaints.

That they are effectual in diminishing the discharge, is very clear from the instances already adduced; and those which we have yet to offer tend still farther to corroborate the truth of this doctrine.

From all these cases I conclude, that such remedies are by far the most efficacious where the discharge is great, and the fibres lax, from whatever cause that discharge may proceed, or wherever the matter may be situated: but the misfortune is, that patients are too apt to despair of getting well, and refuse taking any more medicine, before a sufficient quantity has been administered to have any good

good effect. This, I believe, often proceeds from their having been too much flattered at first with the hopes of a speedy recovery; so that finding themselves deceived, they have no longer any faith in their surgeon.—But this would not be the case, were they at first made sensible of the length of time, and quantity of medicine required to accomplish a cure. At least, I can for myself say, I have often found good effects result from this precaution; and the contrary, where I have neglected to take it.

It is a common practice, in disorders of which we are speaking, to confine the patient to a low milk or vegetable diet; but I can see no good reason for keeping a poor debilitated being in so low a state. Why not allow him

him a moderate quantity of wine and animal food, as long as they agree with him? Is it reasonable to suppose, that a low diet can support the patient under so great discharges as commonly take place? It is right to keep him low at first, while the inflammation is going on; but surely, after the commencement of a considerable discharge, it can no longer be necessary or proper.

Some may say, that my great success in those cases is more owing to the bracing air of the country, than to any other circumstance; and that the bad success in town results, of course, from the foul air in the hospitals. But there is in general so free a circulation of air through the wards, and they are now kept so clean, that

I am

I am clearly of opinion it cannot be owing to that circumstance. But the argument loses its force, when we consider that the patients are *not treated the same way in both situations.*

CASE VII.

E. R. of H. aged 33, of a fair complexion and weakly constitution, was attacked in January, 1789, with a constant tickling cough, pain in his chest, &c. He put himself under the care of a person in this place, who supposed him to labour under a rheumatic fever, and treated his complaint as such for nearly three months. But the patient getting worse, requested (May 21) that I would take him under my care. His complaints were now a fixed pain in his left side, a quick pulse, great difficulty of breathing, with frequent rigors: he could neither lie on the right side, nor

with his head low; and the cough was extremely troublesome. On examining, I found a soft edematous fulness in the left side of his chest. Upon this discovery I had no doubt of the real nature of the case, being clearly of opinion that it was an empyema, and I informed the patient that he had no chance of getting well, except from having an opening made in the part affected. After expressing some reluctance, he at length consented to the operation, and on the same day (May 21) I perforated the chest, in the usual way, between the fifth and sixth ribs, about an equal distance between the sternum and spine. On making this opening, near two quarts of purulent matter were discharged. This gave immediate relief. The wound continued to discharge a large quantity for three days, when the discharge

discharge suddenly stopped, on which I introduced a silver canula, desiring the patient to let it remain as long as the discharge continued great. His cough was removed in about eight days after the operation. He did not raise any pus. He had got almost free from every bad symptom; but as he found it difficult to keep the tube in his chest, and did not like the trouble of frequently introducing it, he suffered the wound to heal without my knowledge.

He remained tolerably well till the 5th of March, 1790, when he returned to me exactly in the same situation in which he had been before. I now found it necessary to perform the operation again. A large quantity of pus was discharged; but unfortunately he this time stopped so long before he

applied to me that the matter had passed into the substance of the lungs, and made its way so completely into the air tubes, that on putting his head lower than his chest it would run off in a full stream out of his mouth, without producing any cough. The pus was thin, and of a redish colour. His appetite was bad; he had a quick low pulse, night sweats, and in fact every hectic symptom. I ought to have mentioned that in the preceding instance I had freely administered to this patient the decoction of the broad-leaved Willow; and I had now equal recourse to it again. This medicine very considerably diminished the discharge, his appetite and strength daily mended, and in ten months from the last operation he became perfectly well, and has continued ever since

since free from cough or any other complaint.

Though he took twelve pints of the above decoction, he never once found any kind of inconvenience from the use of it.

CASE

CASE VIII.

J. S. of H. aged 6, of a scrofulous habit, was seized with a swelling in his knee, pain and other symptoms of inflammation. His mother put him under the care of the person who had attended E. R. This gentleman had thought proper to apply a bread and milk poultice, not only to the place affected, but also to the greater part of the leg. This application had been made use of for some time before the patient came to me. On examining, I found that there was a considerable quantity of pus collected, which, from neglect in not opening it before, had gradually insinuated

sinuated itself all the way down the tibia. I opened it about two inches above the ankle, and it discharged a large quantity of a thin, ill digested and very offensive matter. I then introduced a probe, and found the tibia quite carious. I laid the abscess open all the way up to the knee, applied a pledget of lint, spread with the simple ointment, gave an anodyne draught, and ordered the limb to be fomented. Next day I discovered that the greatest part of the tibia had been destroyed by the matter having been confined so long on it. The sore, instead of getting better, spread daily more and more, and the pain increased, notwithstanding a considerable quantity of opium and Peruvian bark I had given him. Finding this to be the case, I determined to put in practice a mode of treatment I

had

had seen recommended, viz. the sawing out a part of the bone. This operation I performed tolerably well; but I must confess it was not without considerable difficulty that I completed it. I took off about three inches of the middle of the tibia, applied the common dressings with fomentations, and an instrument which I contrived for the purpose of keeping the limb extended. After the operation the child gradually got better, and experienced very little pain in the part. It was however ten months before he got entirely well; during which time he took a very considerable quantity of the bark of the broad-leaved Willow, with opium occasionally.

Recovered from his lameness, he was seized with glandular swellings in the groins, &c. but these were soon dis-

dispersed, on his taking the decoction of the broad-leaved Willow. It is now a year since he got rid of these different complaints, and he has, during that time, had no return of these disorders.

CASE IX.

H. L. of N. aged 39, of a slender and weakly habit, was attacked, Feb. 12th, 1791, with pains in her back, loins, &c. which brought on a miscarriage, when she was five months gone with child. Immediately after her delivery she was seized with a profuse flooding, which reduced her to so low a state that she fainted several times. Her pulse was so low I could scarcely feel it. To check the discharge, I administered the following electuary, which is usually prescribed on such occasions:

R. Salis nitri drachmas tres,

Conservæ rosæ rubræ uncias duas,

Acidi

Acidi vitriolici diluti drachmam unam
cum semisse,
Syr. s. q. s. Misce fiat electuar. cujus
capiat q. n. m. omni bihorio.

13th. Extremely weak, the discharge much the same.

14th. No better. I now gave the following:

R. Alum. com.
Gummi kino, aa drachmas tres,
Conserv. cort. aurant. uncias duas,
Pulv. corticis Peruviani drachmas sex.
Syr. q. s. Misce fiat elect. cujus capt.
q. n. m. ter die.

15th. A little better. Thinks the discharge not quite so great.

16th. The hemorrhage returned as violent as ever. I then administer-

ed the Willow bark in this form:

Take two ounces of the broad-leaved Willow bark, infuse it for two hours in a pint of boiling water, and strain: add half an ounce of alum; and of this mixture let three table spoonfuls be taken three times a day.

17th. The discharge not quite so great. 18th. Much better.

From this time she began to regain her strength, till the 30th, when she was so well that she begged I would not insist on her taking any more of the medicine. She continued in health till the latter end of May, 1792, when she again miscarried, and was seized with as bad a flooding as before. On this occasion I had immediate recourse to the decoction of the Willow with alum, as above. This

This medicine had the same good effects which I before experienced from the use of it; with this difference, that the discharge did not continue half the length of time, which I attribute to my having increased the dose of the medicine very considerably. She took three ounces of the decoction of the Willow, with ten grains of alum, every six hours, for the last ten days.

CASE

CASE X.

H. M. of N. aged 41, was seized, about ten days after her lying in, with a very great discharge, of a whitish colour. This discharge continued for 16 weeks before I saw her; during which time she was under the care of the gentleman who had attended her in her lying in. When I saw her, she complained of great weakness, loss of appetite, &c. &c. I gave her

Pulvis ipecacuanhæ granas quindecim, and afterwards olibanum draughts.

June 1st 1792. The discharge much the same.

2d. No

2d. No better. I directed as follows:

R. Gummi olibani drachmas tres,
Sacc. alb. unciam dimidiam.
Tere simul. Deinde adde
Tinct. corticis Peruviani unciam unam cum semisse,
Aquæ cinnam. uncias decem. misce.
Capiat cochlear. iv. ter die.

4th. No better, though she finished the last of the mixture this morning. I now ordered two ounces of the decoction of the broad leaved Willow, with ten grains of alum, to be taken morning, noon, and night.

5th. Thinks the discharge lessened since she began to take the last medicine.

6th. Much better in every respect. She continued the use of the medicine for

for ten days longer, when she got entirely well, and has remained so ever since.

That alum is of great service in all cases of this kind is a well known fact; and of course, it follows that it must have assissted the decoction of the broad-leaved Willow very much. But I have never experienced the same good effects from the alum before, though I have given it alone, with the Peruvian bark, &c. in similar cases. But as the last two cases are the only ones of the kind wherein I have tried this bark, I cannot speak with the confidence I could wish. From its great astringency, I think we may with reason presume it to be a very efficacious, if not the best remedy in cases of fluor albus and hemorrhage.

I shall

I shall conclude with a single observation. I have found the oak bark a very efficacious remedy where it agreed with the patient, but that was seldom the case. Of the bark of the broad-leaved Willow I can, however, say with truth, that I have never known it to disagree, whether the dose has been small or large, and have never been forced to leave it off on such account, a single instance excepted; and that was in a very weakly constitution.

FINIS.

ERRATA.

Page 21, line 6, for is, read are
—— 25, line 1, for siezed, read seized
—— 38, line 1, for light, read tight